GARMIN G1000 AIR DATA COMPUTER SYSTEM - DESCRIPTION AND OPERATION

1. General

A. This section gives a general description and the operation of the Garmin G1000 Air Data Computer (ADC) System. There are two air data computers and two air data computer configuration modules (pilot's and copilot's) installed in the cockpit.

B. The G1000 Integrated Avionics System uses different ADCs based on Airplane Software/Configuration. Make sure to read each section carefully, each software configuration may use different ADCs that are NOT interchangeable between software versions. Become familiar with the installed software version, refer to Chapter 34, G1000 Integrated Avionics System - Description and Operation. The procedures in this section are typical for the G1000 v.767.XX Family and the G1000 NXi software configuration unless otherwise noted in this document.

(1) The G1000 Software Version v.767.XX uses the Garmin Air Data Computer (GDC 74A).

(2) The G1000 NXi Software uses the Garmin Air Data Computer (GDC 72).

2. Description

A. The ADC's are solid-state devices that connect to the airplane pitot/static system. They use transducers to convert the pressure from the pitot static lines to an electrical value. ADC 1 is installed on the left wing pitot/static system. ADC 2 is installed on the right wing pitot/static system.

B. The Garmin GDC Air Data Computer (ADC) supplies air data for flight instrumentation. The ADC uses source data from different systems applicable sensors, then the unit computes altitude, vertical speed, airspeed, and air temperature data. This is then supplied to the GIA 63W/64W No.1 and GIA 63W/64W No. 2 and to the primary flight displays (PFD 1 and PFD 2) through an ARINC 429 bus. The GDC also receives outside air temperature information from the GTP 59 OAT probe. The Model 208 uses two GDC Air Data Computers for redundancy. ADC 1 information is defaulted to PFD 1, and ADC 2 information is defaulted to PFD 2. But, each ADC may be selected on either PFD through the high speed data bus (HSDB). (Refer to Figure 1).

(1) The GDC ADC 1 and ADC 2 are supplied 28 Vdc electrical power through circuit breakers ADC 1 and ADC 2, respectively, found on the avionics circuit breaker panel.

(2) The ADC's are installed on the instrument panel on the avionics shelf, forward of PFD 1 and PFD 2.

Figure 1 : Sheet 1 : Garmin GDC ADC Installation